AMENDMENTS

In the Claims:

Please cancel without prejudice or disclaimer claims 16 and 24-30.

REMARKS

Status of the Claims

Claims 16 and 24-30 have been canceled without prejudice or disclaimer. Claims 1-3, 5, 6, 8-15, 17-23 and 31-35 are presently in the case. A copy of the pending claims is attached hereto as Exhibit A.

Should Examiner Fredman feel that further discussion of any of the issues is merited, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

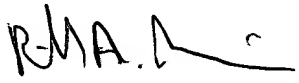

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EXHIBIT A: Pending Claims in Application Serial No. 07/784,222

The claims are listed below as they would appear if the requested amendments are entered in the case.

1. (Three times amended) A composition comprising at least two probes, each labeled with a distinguishable label, for detecting a chromosomal aberration involving the BCR and ABL genes, said chromosomal aberration having an ABL gene side and a BCR gene side, wherein one of said probes hybridizes to the ABL gene side of said chromosomal aberration and the other of said probes hybridizes to the BCR gene side of said chromosomal aberration, wherein said probes hybridize to an aberrant chromosome.

2. (Amended) A composition comprising at least two probes for detecting a chromosomal aberration, each probe labeled with a distinguishable label, wherein one of said probes hybridizes to a part of the ABL gene on one side of said chromosomal aberration and the other of said probes hybridizes to a part of the BCR gene on the other side of said chromosomal aberration, wherein said probes hybridize to an aberrant chromosome.

3. (Amended) The composition of claim 2 wherein said probes hybridize within approximately 800 kb of each other in said aberrant chromosome.

5. (Twice Amended) The composition of claim 1 wherein the labels comprise fluorescent labels.

6. (Amended) The composition of claim 5 wherein the fluorescent labels are distinguishable under a microscope as different colors.

8. (Amended) The composition of claim 1 wherein the probes hybridize with chromosomal DNA *in situ* in cells.

9. (Amended) The composition of claim 8 wherein the cells comprise those in interphase of mitotic division.

10. (Amended) The composition of claim 9 wherein the probes after hybridization are juxtaposed as doublets if a chromosomal aberration is present.

11. (Three Times Amended) The composition of claim 1 wherein one of said probes is capable of hybridizing to at least a portion of the last exon of the ABL gene and the other of said probes is capable of hybridizing to at least a portion of exon I of the BCR gene.

12. (Twice Amended) The composition of claim 10 wherein the chromosomal aberration is further defined as comprising a translocation, said translocation formed by breakpoints which occur on the long arms of human chromosomes 9 and 22.

13. (Amended) The composition of claim 12 wherein the translocation breakpoints are further defined as occurring at the locations designated t(9;22) (q11;q34).

14. (Amended) The composition of claim 13 wherein the translocation breakpoints are further defined to occur in the BCR and ABL genes respectively, and a fusion gene is formed by the translocation, and said fusion gene comprises portions of the BCR and ABL genes.

15. (Twice Amended) The composition of claim 14 wherein the fusion gene encodes a protein p190.

17. (Amended) The composition of claim 8 wherein the cells comprise a sample of human tissue.

18. (Amended) The composition of claim 17 wherein the human tissue sample comprises peripheral blood.

19. (Amended) The composition of claim 17 wherein the human tissue sample comprises bone marrow.

20. (Amended) The composition of claim 8 wherein the cells comprise a sample of cultured cells.

21. (Amended) The composition of claim 1 wherein one of said probes is capable of hybridizing to the major breakpoint cluster region (M-bcr) of chromosome 22.

22. (Twice Amended) The composition of claim 1 wherein one of said probes is capable of hybridizing to the first exon of the BCR gene.

23. (Twice Amended) The composition of claim 1 wherein one of said probes is capable of hybridizing to at least a part of the last exon of the ABL gene.

31. (Amended) The composition of claim 14 wherein the fusion gene encodes either of two proteins p190 and p210.

32. (Amended) The composition of claim 31 wherein the presence of said fusion gene is diagnostic or prognostic for acute lymphocytic leukemia (ALL).

33. (Amended) The composition of claim 31 wherein the presence of said fusion gene is diagnostic or prognostic for chronic myelogenous leukemia (CML).

34. (Amended) A kit for the detection of chromosomal aberrations, comprising a first and second nucleic acid probe, each labeled with a distinguishable label, said first probe capable of specifically hybridizing to a part of the ABL gene on one side of said chromosomal aberration and

said second probe capable of specifically hybridizing to a part of the BCR gene on the other side of said chromosomal aberration, wherein said probes hybridize to an aberrant chromosome.

35. The composition of claim 1 wherein the aberrant chromosome is the Philadelphia chromosome.